

Lake Hall Lake Vegetation Index Results (8-13-2014)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations,

and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units. Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

| Aquatic life use category | LVI Range | Description |
|---------------------------|-----------|---|
| Exceptional | 78–100 | Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance. |
| Healthy | 43–77 | About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%. |
| Impaired | 0–42 | About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less than 10% of the taxa are sensitive. |

The Lake Vegetation Index score for Lake Hall was 71, placing the lake's vegetative community in the healthy category.

Forty five species were found during the survey. The native species, fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*) and fragrant waterlily (*Nymphaea odorata*), were the most dominant species in the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occi-*

dentalis) and water pennywort (*Hydrocotyle* sp.).

Unfortunately, Chinese tallow tree (*Sapium sebiferum*) and hydrilla (*Hydrilla verticillata*), both listed as Category I Invasive Exotics by the Florida Exotic Pest Plant Council, were found in Lake Hall.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Hall LVI survey (8-13-14).

| Scientific Name | Common Name |
|---|-------------------------|
| <i>Acer rubrum</i> | red maple |
| <i>Azolla caroliniana</i> | mosquito fern |
| <i>Azolla pinnata</i> | feathered mosquito fern |
| <i>Bacopa caroliniana</i> | lemon Bacopa |
| <i>Betula nigrans</i> | river birch |
| <i>Brasenia schreberi</i> | watershield |
| <i>Cabomba caroliniana</i> | fanwort |
| <i>Cephalanthus occidentalis</i> | buttonbush |
| <i>Ceratophyllum demersum</i> | coontail |
| <i>Cyperus</i> sp. | flatsedge |
| <i>Decodon verticillatus</i> | swamp loosestrife |
| <i>Eocharis vivipara</i> | viviparous spikerush |
| <i>Eupatorium capillifolium</i> | dogfennel |
| <i>Hydrilla verticillata</i> (I) | hydrilla |
| <i>Hydrocotyle</i> sp. | water pennywort |
| <i>Hydrolea quadrivalvis</i> | waterpod |
| <i>Leersia hexandra</i> | southern cutgrass |
| <i>Liquidamber styraciflua</i> | American sweetgum |
| <i>Ludwigia arcuata</i> | needleleaf Ludwigia |
| <i>Ludwigia</i> sp. | primrose willow |
| <i>Ludwigia suffruticosa</i> | shrubby primrose willow |
| <i>Mayaca fluviatilis</i> | stream bogmoss |
| <i>Mikania scandens</i> | climbing hempvine |
| <i>Myrica cerifera</i> | wax myrtle |
| <i>Myriophyllum heterophyllum</i> | twoleaf watermilfoil |
| <i>Nelumbo lutea</i> | American lotus |
| <i>Nuphar</i> sp. | spatterdock |
| <i>Nymphaea odorata</i> | fragrant waterlily |
| <i>Nymphoides aquatica</i> | banana lilly |
| <i>Nyssa sylvatica</i> var. <i>biflora</i> | swamp tupelo |
| <i>Panicum hemitomon</i> | maidencane |
| <i>Pinus taeda</i> | loblolly pine |
| <i>Polygonum densiflorum</i> (<i>glabrum</i>) | denseflower knotweed |
| <i>Polygonum hirsutum</i> | hairy smartweed |
| <i>Pontederia cordata</i> | pickerelweed |
| <i>Sabal palmetto</i> | cabbage palm |
| <i>Sagittaria filiformis</i> | threadleaf arrowhead |
| <i>Salix carolina</i> | coastal plain willow |
| <i>Sapium sebiferum</i>(I) | Chinese tallow tree |

| | |
|--|----------------------------|
| <i>Taxodium ascendens</i> | pond cypress |
| <i>Toxicodendron radicans</i> | eastern poison ivy |
| <i>Typha</i> sp. | cattail |
| <i>Utricularia biflora</i> (<i>U. gibba</i>) | humped bladderwort |
| <i>Utricularia floridana</i> | Florida yellow bladderwort |
| <i>Vallisneria americana</i> | eelgrass |
| <i>Xyris</i> sp. | yellow-eyed grass |

I - Category I Invasive Exotics

For additional information about the LVI please review the Florida Department of Environmental Protection's [LVI Primer document](#).

For additional information about Category I and II invasive exotic plants, please visit the [Florida Exotic Pest Plant Council](#) webpage.

For more detailed information about the above species, please visit the [Atlas of Florida Vascular Plants](#) website.